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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,542	07/17/2003	Werner Lautenschlager	27392/27614	2472
4743 7590 04/02/2007 MARSHALL, GERSTEIN & BORUN LLP 233 S. WACKER DRIVE, SUITE 6300 SEARS TOWER CHICAGO, IL 60606			EXAMINER MAYEKAR, KISHOR	
			ART UNIT 1753	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/02/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/621,542	Applicant(s) LAUTENSCHLAGER, WERNER	
	Examiner Kishor Mayekar	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-15, 18-34 and 36-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-15, 18-34 and 36-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 16 March 2007 has been entered.

Claim Rejections - 35 USC § 102 and § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-6, 11, 15, 21, 25-28, 36, 37, 44 and 45 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Warmbier et al. (US 5,408,074). Warmbier's invention, a reference cited in the last Office, is directed to an apparatus for the selective control of heating and irradiation of materials in a conveying path. Warmbier discloses that the apparatus comprises a conveying path defined by a pipe 1 (a container), a screw conveyor 2 rotatably mounted in the pipe 1 by

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which the material is supplied to the pipe 1 and a treatment chamber is formed therebetween, microwave generators 3, and a resonator 5 (microwave chamber) surrounding a length of the pipe 1 (Figs. 1 and 2; col. 3, lines 6-18 and col. 4, lines 27-34 and lines 41-46). Since the treatment chamber is formed between the pipe 1 and the screw conveyor 2, the treatment chamber has the helical shape fitted to the present invention's disclosure on page 15. Warmbier's Fig. 1 shows the pipe 1 being extended at least partly in the microwave chamber and protruded therefrom; and in Fig. 2 and col. 4, 27-34 that the materials are supplied through a funnel opening 13 (a lateral connecting opening) of an extruder 11 and transported in the transporting direction 8 by its screw conveyor 2 through the microwave chamber. As such Warmbier discloses an apparatus comprises all the structures as claimed with the screw conveyor 2 from extruded chamber through the microwave chamber, and hence the screw conveyor 2 protrudes from the microwave chamber or the pipe. If there is a difference, it will be the employing of a single screw conveyor from the extruded chamber through the microwave chamber. However, since Warmbier discloses that the material is extruded and transports by its screw conveyor from the extruded chamber through the microwave chamber, the provision of a single and continuous screw conveyor would be within the level of ordinary skill in the art.

As to the subject matter of claim 2, Warmbier's device inherently possesses the recited mixing device because of the use of the spiral device starting in the container for

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transporting materials therefrom.

As to the subject matter of claim 3, Warmbier's screw conveyor is the same as the worm conveyor. Further, if there is a difference between Warmbier's screw conveyor and the recited worm conveyor, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Warmbier's teachings because the selection of any of known equivalent conveyors for transporting the material would have been within the level of ordinary skill in the art.

4. Claims 18, 19, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warmbier '074. As to the subject matter of claims 18, 19, 29 and 30, the selection of the longitudinal would have been within the level of ordinary skill in the art as it has been settled that proper adjustment of a known effective variable of a known or obvious process is within the capabilities of one having ordinary skill in the art, *In re Aller* 105 USPQ 233; *In re Boesch* 205 USPQ 215.

5. Claims 8, 9, 20 and 32-34 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Warmbier '074 in view of MacKenzie (US 4,608,261). The difference between Warmbier as applied above and the instant claims is the detailing of the recited connection of the container. MacKenzie shows the detailing in a heat-treating apparatus using microwave (Fig. 1). The subject matter as a whole would have been obvious to one

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having ordinary skill in the art at the time the invention was made to have modified Warmbier's teachings as shown by MacKenzie because this would result in attaching the container to the apparatus housing.

6. Claims 7 and 31 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Warmbier '074 in view of Miyazaki et al. (US 4,565,670). The difference between Warmbier as applied above and the instant claims is the provision of the recited inclination of the apparatus. Miyazaki shows in a heat-treating apparatus using microwaves the limitation (Fig. 1). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Warmbier's teachings as shown by Miyazaki because this would result in facilitating the removal of the treated material.

7. Claims 12-14, 22-24 and 38-43 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Warmbier '074 in view of GB 2,110,803 A. The differences between Warmbier as applied above and the instant claims are the provision of the recited pressure-limiting valve and the recited cooling or heating device.

As to the former to claims 14 and 43, GB '803 shows in a heat-treating apparatus using microwave the heating section 3 includes a manifold 39 located on the top of the heating section to hold vapors and the withdrawn of vapors from the manifold 39 via outlet

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41 (col. 2, lines 11-17). It appears that the outlet 41 is equivalent to the recited pressure-limiting device. The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Warmbier's teachings as shown by GB '803 because this would result in exhausting excessive pressure and render the heating section safe from excessive internal pressure.

As to the latter to claims 12, 13, 22-24 and 38-42, GB '803 shows the limitation (section 3 in Fig. 1) and that a feed hopper may be replaced by an extruder device (col. 2, lines 42-44). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Warmbier's teachings as shown by GB '808 because this would result in heating the material prior to subjecting to microwave. Further, the motivation to make a specific structure is always related to the properties or uses one skilled in the art would expect the structure to have, *In re Newell* 13 USPQ 2d 1248, *Fromson v. Advance Offset Plate* 225 USPQ 26; *In re Gyurik* 201 USPQ 552

Response to Arguments

8. Applicant's arguments filed 16 February 2007 have been fully considered but they are not persuasive.

In response to Applicant's argument that Warmbier does not disclose or suggest a device for spirally transporting substances in a container that includes a helical treatment

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chamber. Since Warmbier's treatment chamber is formed between the pipe 1 and the screw conveyor 2, the treatment chamber has the helical shape fitted to the present invention's disclosure on page 15.

To the argument to the rejections of depending claims, since the depending claims depend upon the rejected claims 1 and 2, the rejections stand.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service

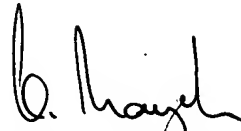
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Representative or access to the automated information system, call 800-786-9199 (IN

USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'K. Mayekar', written in a cursive style.

Kishor Mayekar
Primary Examiner
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